

TCS 455: Quiz 2 Solution

Semester/Year: 2/2009

Course Title: Mobile Communications

Name	ID

Instructions

1. Separate into groups of no more than three persons.
2. Closed book. Closed notes.
3. Only one submission is needed for each group. Late submission will not be accepted.
4. **Do not panic.**

I. Take a look at each of the description/statement in the following table. Indicate (in the leftmost column) whether it describes or best-matches with the licensed bands (L) or unlicensed (U) bands.

L or U	
L	Blocks of spectrum are commonly assigned through spectral auctions to the highest bidder
U	For experimental systems and to aid development of new wireless technologies
U	Etiquette rules
U	Very cheap to transmit on
U	Wireless LANs, Bluetooth, and cordless phones
U	There is a maximum power constraint over the entire spectrum
L	Provide immunity from any kind of interference outside of the system itself
L	GSM

II. Take a look at each of the description/statement in the following table. Indicate (in the leftmost column) whether it describes or best-matches with FDMA (F) or TDMA (T).

F or T	
F	The oldest multiple access scheme for wireless communications.
T	The transmission for any user is non-continuous
T	Digital data and digital modulation must be used
F	Used exclusively for multiple access in 1G down to individual resource units or physical channels
F	Allows completely uncoordinated transmission in the time domain
T	A channel may be thought of as a particular time slot that reoccurs every frame
F	No time synchronization among users is required.
F	Different carrier frequency is assigned to each user so that the resulting spectra do not overlap
T	Transmit data in a buffer-and-burst method
F	Require less overhead bits
F	Need to use costly bandpass filters